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Effects of Classroom Arrangement and Design on Student On-Task Behavior in a K-2

Classroom

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Abstract

This study was conducted on a K-2 classroom, in which the researchers made changes to the classroom, such as desk positioning and wall décor, to see what impacts they have on the students' on-task behavior. The researchers measured the students' perceived levels of on-task behavior using a scale that they created. The scale was numbered 1-3; one meaning that, as a whole, the students appeared to not be on-task, two meaning that as a class the students appeared to be somewhat on-task, and three meaning that altogether the students appeared to be fully on-task. The results were measured based on the researchers' observations. They concluded that the changes to the classroom did affect the students' on-task behavior, yet the altering of the desk positioning made more of an impact than the changes to the wall décor. This reveals that teachers should attempt various classroom designs, in order to find what best suits the needs of the students and creates an environment in which they can stay on-task.

Introduction

Effects of Classroom Arrangement and Design on Student On-Task Behavior in a K-2 Classroom

The ability to stay on task often fluctuates among students, especially in the lower grade levels. Students can become distracted and stray away from the task at hand, leaving their work either insufficient or undone. Jones and Jones (2016) share in *Comprehensive Classroom Management: Creating Communities of Support and Solving Problems*, “Studies indicate that the amount of time students are engaged in instructional activities varies from less than 50 percent in some classes to more than 90 percent in others.” Teacher should strive for their students to be engaged for as much time as possible. Therefore, the amount of time spent performing on-task can play a crucial role in a student’s academic success.

Classrooms are spaces filled with endless things that can either enhance or hinder the success of the students. From the desks to the bulletin boards, there are multiple ways for the teachers to set-up an environment for learning. In order to better understand a student’s ability to stay on-task, the researchers chose to conduct a study to see if when changes are made to the classroom if it affects students’ on-task behavior. More specifically, do classroom arrangement and design, such as desk positioning and wall décor, affect K-2 students’ on-task behavior?

Limitations or Delimitations

One limitation of this study would be the amount of time available. The researchers desired to have more time for data collection. Another limitation would be that the researchers were unable to compare the effects on one K-2 class when compared to another K-2 class. A third limitation was the presence of the researchers in the classroom. This fact may have altered

the students' typical behavior in the classroom, therefore changing their perceived ability to stay on-task.

Review of Related Literature

Student engagement and productivity, or what the researchers of this study consider to be on-task behavior, is a topic being studied by educators now more than ever. "Over the past 25 years, student engagement has become prominent in psychology and education because of its potential for addressing problems of student boredom, low achievement, and high dropout rates" (Wang, 2014). Jones and Jones (2016) agree with this in their explanation that students need to be "actively involved in the learning process" in order to achieve success. This implies that when teachers take the students' abilities to stay on-task into account, they are not only benefitting them in their own classroom, but also setting them up to perform on-task in future classes.

The definition of on-task behavior is something that varies among all educators. Gill and Remedios (2013) state that, "In education, on-task behavior has been used as a proxy for engagement, and because engagement has been a key variable for intervention studies, many studies have investigated whether the interventions increase on-task behavior." This ideal for productivity and engagement plays a major role in their academic achievement. Therefore any deterrents from it must be addressed and altered. Without correction of these distractions, students may suffer from long-term consequences.

It is of significant concern that some kindergarten children have problems becoming engaged, given that children's early engagement levels have predicted high school dropout, math and reading achievement until sixth grade, grade retention until fifth grade, and school absences across the kindergarten year. (Searle et al., 2013)

Consequently, creating an environment that is enriching for the students should be one of teachers' top priorities. Fernandes et al. (2011) agree with this assumption by stating the following examples, "Further, a pleasant classroom learning environment helps students learn better, and different seating locations provide students with access to learning resources, such as the teacher and clear lines of sight to the board."

The classroom is a space where adolescents spend the majority of their time, so it should be designed in a way that encourages learning. Kraemer et al. (2012) share in their article *A Comparison of the Mystery Motivator and the Get 'Em on Task Interventions for Off-Task Behaviors*, that the process of creating and maintaining a safe and productive learning environment is known as "Positive Behavior Support (PBS)." There are many educators who strongly believe that the students' physical environment inside the classroom has a major impact on their academic experience, which most likely impacts their actions in the classroom. Fernandes et.al (2011) share that "Though this belief has become an anecdotal comment, there are indicators suggesting that student location within the classroom affects academic performance." A better understanding of how the classroom design affects students' learning processes will help teachers to know how to set up and design their classrooms in a way that is most beneficial for their students.

Methodology

Participants

The research for this study was conducted in a single classroom at a small private school in southeastern Tennessee. The participants in this study consisted of a class of eleven students, ranging from kindergarten through second grade. The participating class was composed of one kindergartner, five first graders, and five second graders. It is important to note that the

researchers received consent from all eleven students and their personal identities will remain undisclosed.

Data Collection Procedures

Before implementing any changes to the desk positioning or wall décor, the researchers observed what the K-2 class was like on a typical school day. This was so the researchers would have a control in which to compare their further observations to. On this day, the class seemed rambunctious, yet they were on-task with the assignments presented to them. Then for the first data collection, the researchers altered the K-2 classroom's desk positioning. Before the changes were made, the students' desks were set up in two "L" shaped positions (see appendix.) The teacher explained that the desks were in these positions in order for all students to see the teacher in the front of the classroom. When the researchers adjusted the desks, they moved them so half of the students were now facing the back of the classroom, while the other students still faced the front, yet they were in a different spot than before (see appendix). The students were not at their desks when the changes were being made.

When the students returned to their newly arranged desks, they were to sit and independently fill out a math worksheet. The desks were only in the changed positions for math class, in which the students sat at their recently adjusted desks for a maximum of ten minutes. The students did not need to see the board or bulletin boards at this time, just the math worksheet at their desks.

For the second data collection, the researchers covered up the classroom's vibrant wall décor with plain white paper. When the researchers state wall décor in this article, they are referring to the bulletin boards in the classroom, but this may differ based on individual classrooms. The wall décor that was covered was at the front of the room and was not needed by

the students in order to complete their assignment at hand. A total of two bulletin boards were covered when collecting data. The bulletin boards were covered for a total of ten minutes while the students were at various stations for math.

Data Analysis Procedures

The data was analyzed on a scale of 1-3. One being that the students, as a whole, appeared to not be on-task. Two being that as a class the students appeared to be somewhat on-task. Three being that altogether the students appeared to be fully on-task. These ratings are based on what the researchers believe on-task behavior should look like. They consider it to be when the student is engaged in their assignment, seated at their desk or other location they were asked to be at, and completing their work. The analysis on the data was based on the researchers' observations. The researchers first analyzed the results separately, then discussed their findings together.

Results

When the researchers made changes to the desk positioning, as a class, the kindergarten through second graders received a two on the measurement scale for on-task behavior. This meant that the students appeared to be somewhat on-task. When the changes were first made, the class seemed flustered and distracted. It was notable that this change to their classroom set-up caused them to stray away from the task at hand. Yet, once they were settled into their newly placed seats, as a class, they seemed to be somewhat on-task. It is important to note that the students who were now facing the back of the classroom received the same score on the measurement scale as the students who were now facing the front of the classroom. The students were measured as a whole, no matter their seating placement.

When the researchers made the changes to the wall décor, little change was noticed in the students' on-task behavior as a whole. As the researchers covered the wall décor with the plain white paper, the students questioned what was happening, which caused them to become distracted from the task at hand, yet when the coverings were hung on the bulletin boards, the students displayed little reaction. Therefore, the students received a three on the measurement scale for on-task behavior.

Conclusions and Recommendations

Based on the researchers results it can be concluded that changes made to the students physical placement, such as desk positioning, fluctuated their on-task behavior more so than changes made to the wall décor, such as covering bulletin boards with plain white paper. Yet it is crucial to note that the changes in the desk patterns led to the students to only be somewhat on-task. This reveals that teachers should attempt various classroom designs, in order to find what best suits the needs of the students and creates an environment in which they can stay on-task. For future research, the researchers encourage classroom teachers to test out several desk position in the classroom to see which pattern alludes to the most students being on-task. Also, future research should include conducting these experiments on multiple classes, possibly on other grade levels, to compare their reactions.

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Appendix

Before the researchers made changes the desk positions:



After the researchers made changes to the desk positions:

